CLAIMS

1. Apparatus for applying current to a nerve, comprising:

a cathode, adapted to be placed in a vicinity of a cathodic longitudinal site of the nerve and to apply a cathodic current to the nerve;

a primary inhibiting anode, adapted to be placed in a vicinity of a primary anodal longitudinal site of the nerve and to apply a primary anodal current to the nerve; and

a secondary inhibiting anode, adapted to be placed in a vicinity of a secondary anodal longitudinal site of the nerve and to apply a secondary anodal current to the nerve, the secondary anodal longitudinal site being closer to the primary anodal longitudinal site than to the cathodic longitudinal site.

2. Apparatus according to claim 1, wherein the apparatus is adapted to be placed on the nerve such that, relative to the anodal longitudinal sites, the cathodic longitudinal site is proximal to a brain of a subject, the subject including the nerve.

3. Apparatus according to claim 1, wherein the apparatus is adapted to be placed on the nerve such that, relative to the anodal longitudinal sites, the cathodic longitudinal site is distal to a brain of a subject, the subject including the nerve.

4. Apparatus according to claim 1, wherein the primary inhibiting anode is adapted to apply the primary anodal current to the nerve so as to block propagation of action potentials past the primary anodal longitudinal site.

5. Apparatus according to claim 1, wherein the primary inhibiting anode is adapted to apply the primary anodal current to the nerve so as to block propagation past the primary anodal longitudinal site of action potentials in a first set of nerve fibers, and to allow propagation past the primary anodal longitudinal site of action potentials in a second set of nerve fibers, the second set of nerve fibers having characteristic diameters generally smaller than characteristic diameters of the nerve fibers in the first set.

6. Apparatus according to any one of claims 1-5, wherein the cathode comprises a plurality of cathodes, placed in the vicinity of the cathodic longitudinal site of the nerve, at respective positions around an axis of the nerve.

7. Apparatus according to claim 6, wherein the plurality of cathodes are adapted to apply the cathodic current at a characteristic frequency greater than 1000 Hz.

8. Apparatus according to any one of claims 1-5, comprising a primary insulating element disposed between the cathode and the primary inhibiting anode.

9. Apparatus according to claim 8, wherein the primary insulating element is disposed in a position with respect to the cathode and the primary inhibiting anode so as to guide the flow of current between the cathode and the primary inhibiting anode.

10. Apparatus according to claim 8, comprising a secondary insulating element, disposed between the primary inhibiting anode and the secondary inhibiting anode.

11. Apparatus according to claim 10, wherein a characteristic size of the secondary insulating element is smaller than a characteristic size of the primary insulating element.

12. Apparatus according to claim 10, wherein a characteristic distance of the secondary insulating element to an axis of the nerve is greater than a characteristic distance of the primary insulating element to the axis of the nerve.

13. Apparatus according to any one of claims 1-5, comprising a tertiary inhibiting electrode, adapted to be placed in a vicinity of a tertiary anodal longitudinal site of the nerve and to apply a tertiary anodal current to the nerve, the tertiary anodal longitudinal site being closer to the secondary anodal longitudinal site than to the primary anodal longitudinal site.

14. Apparatus according to claim 13, wherein the tertiary inhibiting anode is configured such that a current density of the tertiary anodal current is of lower magnitude than a magnitude of a current density of the secondary anodal current.

15. Apparatus according to any one of claims 1-5, comprising a housing, coupled to the cathode, the primary inhibiting anode and the secondary inhibiting

anode, adapted to facilitate placement of the cathode and the anodes in the vicinities of their respective sites.

16. Apparatus according to claim 15, wherein the housing is configured such that an arc, defined by an extent that the housing is adapted to surround the nerve, is between about 90 and 270 degrees.

17. Apparatus according to claim 15, wherein the housing is configured such that an arc, defined by an extent that the housing is adapted to surround the nerve, is between about 270 and 359 degrees.

18. Apparatus according to claim 15, wherein a closest cathode distance to an axis of the nerve, a closest primary inhibiting anode distance to the axis, and a closest secondary inhibiting anode distance to the axis are all at least approximately 1.5 times greater than the radius of the nerve.

19. Apparatus according to claim 15, wherein the secondary inhibiting anode is configured such that a secondary anodal current density induced by the secondary anodal current is of lower magnitude than a magnitude of a primary anodal current density induced by the primary anodal current.

20. Apparatus according to claim 19, wherein the primary anodal current is substantially of the same magnitude as the secondary anodal current.

21. Apparatus according to claim 19, wherein a characteristic surface area of the secondary inhibiting anode is higher than a characteristic surface area of the primary inhibiting anode.

22. Apparatus according to claim 21, wherein the characteristic surface area of the secondary inhibiting anode is at least 2 times higher than the characteristic surface area of the primary inhibiting anode.

23. Apparatus according to claim 15, wherein the secondary inhibiting anode is configured such that a current density of the secondary anodal current is of lower magnitude than a magnitude of a current density of the primary anodal current.

24. Apparatus according to claim 23, wherein a characteristic surface area of the primary inhibiting anode is higher than a characteristic surface area of the secondary inhibiting anode.

25. Apparatus according to claim 24, wherein a common voltage is applied to the primary inhibiting anode and to the secondary inhibiting anode.

26. Apparatus according to claim 23,

wherein the primary inhibiting anode is adapted to have associated therewith a primary level of electrical impedance between the primary inhibiting anode and the nerve, when in the vicinity of the primary anodal longitudinal site, and

wherein the secondary inhibiting anode is adapted to have associated therewith a secondary level of electrical impedance between the secondary inhibiting anode and the nerve when in the vicinity of the secondary anodal longitudinal site, the secondary level of impedance having a higher magnitude than the primary level of impedance.

27. Apparatus according to claim 23, wherein the secondary inhibiting anode is adapted to be coupled to the housing so as to define a secondary anode distance to an axis of the nerve, and wherein the primary inhibiting anode is adapted to be coupled to the housing so as to define a primary anode distance to the axis of the nerve that is smaller than the secondary anode distance.

28. Apparatus according to claim 27, wherein a ratio of the secondary anode distance to the primary anode distance is greater than approximately 1.5 : 1.

29. Apparatus according to any one of claims 1-5, comprising a primary fiber-selection anode, adapted to be placed in a vicinity of a primary fiber-selection anodal longitudinal site of the nerve that is closer to the cathodic longitudinal site than to the primary anodal longitudinal site.

30. Apparatus according to claim 29, comprising a secondary fiber-selection anode, adapted to be placed in a vicinity of a secondary fiber-selection anodal longitudinal site of the nerve that is closer to the primary fiber-selection anodal longitudinal site than to the cathodic longitudinal site.

31. Apparatus according to any one of claims 1-5, comprising a control unit, adapted to drive the cathode to apply the cathodic current to the nerve, adapted to drive the primary inhibiting anode to apply the primary anodal current to the nerve, and adapted to drive the secondary inhibiting anode to apply the secondary anodal current to the nerve.

32. Apparatus according to claim 31, comprising a first resistive element coupled between the control unit and the primary inhibiting anode, and a second resistive element coupled between the control unit and the secondary inhibiting anode, the second resistive element having a resistance higher than a resistance of the first resistive element.

33. Apparatus according to claim 31, comprising exactly one lead that leaves the control unit for coupling the control unit to the primary and secondary inhibiting anodes.

34. Apparatus according to claim 31, comprising respective leads that leave the control unit and couple the control unit to the primary and secondary inhibiting anodes.

35. Apparatus according to claim 31, wherein the control unit is adapted to configure a current density of the secondary anodal current to be of lower magnitude than a current density of the primary anodal current.

36. Apparatus according to claim 31, wherein the control unit is adapted to configure an amplitude of a current density of the cathodic current to be between 1.1 and 2 times greater than an amplitude of a current density of the primary anodal current.

37. Apparatus according to claim 31, wherein the control unit is adapted to configure an amplitude of a current density of the cathodic current to be between 3 and 6 times greater than an amplitude of a current density of the secondary anodal current.

38. Apparatus according to claim 31, wherein the control unit is adapted to configure an amplitude of a current density of the primary anodal current to be at

least 2 times greater than an amplitude of a current density of the secondary anodal current.

39. Apparatus for applying current to a nerve having a radius and a longitudinal central axis, comprising:

a housing, adapted to be placed in a vicinity of the nerve; and

a cathode and an anode, fixed to the housing so as to define, when the housing is placed in the vicinity of the nerve, respective closest cathode and anode distances to the axis that are both at least approximately 1.5 times greater than the radius of the nerve.

40. Apparatus according to claim 39, wherein the closest cathode and anode distances to the axis are both at least approximately 2 times greater than the radius of the nerve.

41. Apparatus according to claim 39, wherein the apparatus is adapted to be placed on the nerve such that, relative to the anode, the cathode is in a vicinity of the nerve which is proximal to a brain of a subject, the subject including the nerve.

42. Apparatus according to claim 39, wherein the apparatus is adapted to be placed on the nerve such that, relative to the anode, the cathode is in a vicinity of the nerve which is distal to a brain of a subject, the subject including the nerve.

43. Apparatus according to claim 39, wherein the cathode comprises a plurality of cathodes, placed in the vicinity of the cathodic longitudinal site of the nerve, at respective positions around the axis of the nerve, each of the respective positions being at a distance from the axis at least 1.5 times greater than the radius of the nerve.

44. Apparatus according to claim 39, wherein the anode is adapted to apply anodal current to the nerve so as to block propagation of action potentials past the anode.

45. Apparatus according to claim 39, wherein the anode is adapted to apply current to the nerve so as to block propagation past the anode of action potentials in a first set of nerve fibers, and to allow propagation past the anode of action

potentials in a second set of nerve fibers, the second set of nerve fibers having characteristic diameters generally smaller than characteristic diameters of the nerve fibers in the first set.

46. Apparatus according to any one of claims 39-45, comprising an insulating element disposed between the cathode and the anode.

47. Apparatus according to claim 46, wherein a characteristic distance of the insulating element to the axis of the nerve is at least 1.5 times greater than the radius of the nerve.

48. Apparatus according to claim 46, wherein the distance of the anode to the axis is substantially the same as a characteristic distance of the insulating element to the axis of the nerve.

49. Apparatus according to claim 46, wherein the distance of the anode to the axis is greater than a characteristic distance of the insulating element to the axis of the nerve.

50. Apparatus according to claim 49, wherein the distance of the anode to the axis is within 30% of the characteristic distance of the insulating element to the axis of the nerve plus a width of the anode.

51. Apparatus for applying current to a nerve having a radius and a longitudinal central axis, comprising:

a housing, adapted to be placed in a vicinity of the nerve;

first and second electrodes, fixed to the housing; and

an insulating element, fixed to the housing between the first and second electrodes so as to define a characteristic closest insulating element distance to the central axis that is at least approximately 1.5 times greater than the radius of the nerve.

52. Apparatus according to claim 51, wherein the insulating element is adapted to be placed in the vicinity of the nerve at a longitudinal site that is between respective longitudinal sites of the first and second electrodes.

53. Apparatus according to claim 51, wherein the insulating element is adapted to be placed in the vicinity of the nerve at a site with respect to the axis of the nerve that is between respective sites of the first and second electrodes, with respect to the axis.

54. Apparatus according to any one of claims 51-53, wherein the first and second electrodes are fixed to the housing so as to define respective first and second closest electrode distances to the axis, when the housing is placed in the vicinity of the nerve, and wherein at least one of the closest electrode distances is greater than or equal to the closest insulating element distance.

55. Apparatus according to claim 54, wherein the first and second closest electrode distances are both greater than or equal to the closest insulating element distance.

56. Apparatus according to claim 55, wherein the first and second closest electrode distances are both at least 30% greater than the closest insulating element distance.

57. Apparatus for applying current to a nerve, comprising:

a cathode, adapted to be placed in a vicinity of a cathodic site of the nerve; and

a plurality of anodes, adapted to be placed in a vicinity of respective anodal longitudinal sites of the nerve and to apply respective anodal currents to the nerve, that define, in combination, an anodal activation function having: (a) a hyperpolarizing portion thereof having a maximum hyperpolarizing amplitude, and (b) a depolarizing portion thereof, having a maximum depolarizing amplitude corresponding to a depolarizing site on the nerve distal with respect to the cathode to a site corresponding to the hyperpolarizing portion, wherein the maximum hyperpolarizing amplitude is at least five times greater than the maximum depolarizing amplitude.

58. Apparatus according to claim 57, comprising a housing to which the cathode and the plurality of anodes are coupled, wherein a distance of a first one of

the anodes to an axis of the nerve is less than a distance of a second one of the anodes to the axis, the first one of the anodes being coupled to the housing closer to the cathode than the second one of the anodes.

59. Apparatus according to claim 57, comprising a housing to which the cathode and the plurality of anodes are coupled, wherein a surface area of a first one of the anodes is less than a surface area of a second one of the anodes, the first one of the anodes being coupled to the housing closer to the cathode than the second one of the anodes.

60. Apparatus according to claim 57, comprising a housing to which the cathode and the plurality of anodes are coupled, wherein one of the anodes is positioned within the housing so as to reduce a virtual cathode effect induced by another one of the anodes.

61. Apparatus according to any one of claims 57-60, wherein the cathode and anodes are disposed such that a first one of the anodal longitudinal sites is between the cathodic site and a second one of the anodal longitudinal sites.

62. Apparatus according to claim 61, wherein the anodes are disposed such that the second one of the anodal longitudinal sites is between the first one of the anodal longitudinal sites and a third one of the anodal longitudinal sites.

63. Apparatus according to claim 61, wherein the anodes are adapted such that a current density of the anodal current applied at the second one of the anodal longitudinal sites has a lower magnitude than a magnitude of a current density of the anodal current applied at the first one of the anodal longitudinal sites.

64. Apparatus according to claim 63, wherein the anodes are adapted such that a ratio of the current density of the anodal current applied at the first site to the current density of the anodal current applied at the second site is at least 2:1.

65. Apparatus according to claim 63, wherein the anodes are adapted such that a ratio of the current density of the anodal current applied at the first site to the current density of the anodal current applied at the second site is at least 5:1.

66. Apparatus for applying current to a nerve, comprising:

a cathode, adapted to be placed in a vicinity of a first longitudinal site of the nerve; and

an elongated anode, adapted to be placed in a vicinity of a second longitudinal site of the nerve, and, when so placed, to have associated therewith: (a) a first level of electrical impedance between the nerve and a location on the elongated anode proximal to the cathode, and (b) a second level of electrical impedance, greater than the first level, between the nerve and a location on the elongated anode distal to the cathode.

67. Apparatus according to claim 66, comprising a coating disposed on a surface of the elongated anode, configured to provide the first and second levels of impedance.

68. Apparatus according to claim 67, wherein the coating is disposed on the surface in different respective thicknesses at the two locations on the elongated anode.

69. Apparatus according to claim 67, wherein the coating comprises a coating that has undergone a surface treatment, and wherein the coating is configured to provide the first and second levels of impedance responsive to having undergone the surface treatment.

70. Apparatus according to claim 67, wherein the coating comprises iridium oxide.

71. Apparatus according to claim 67, wherein the coating comprises titanium nitrite.

72. Apparatus according to claim 67, wherein the coating comprises platinum iridium.

73. Apparatus for applying current to a nerve having a longitudinal axis, comprising:

two or more electrodes, adapted to be placed in a vicinity of a longitudinal site of the nerve, at respective positions around the axis; and

a control unit, adapted to:

(a) drive current between two of the electrodes, thereby defining a first pair of the electrodes and a first direction of current flow, and, less than one millisecond later,

(b) drive current between two of the electrodes, thereby defining a second pair of the electrodes and a second direction of current flow, and

(c) cycle between steps (a) and (b) at a rate greater than 1000 Hz,

wherein at least either the first pair of electrodes is different from the second pair of electrodes or the first direction of current flow is different from the second direction of current flow.

74. Apparatus according to claim 73, wherein the two or more electrodes comprise three or more electrodes.

75. Apparatus according to claim 73, wherein the two or more electrodes comprise four or more electrodes.

76. Apparatus according to claim 73, wherein the two or more electrodes are adapted to be placed at a distance from the axis which is at least 1.5 times a radius of the nerve.

77. Apparatus according to claim 73, wherein the control unit is adapted to set the rate to be greater than 4000 Hz.

78. Apparatus for applying current to a nerve having a longitudinal axis, comprising:

a set of two or more cathodes, adapted to be placed in a vicinity of a cathodic longitudinal site of the nerve, at respective positions around the axis; and

a set of two or more anodes, adapted to be placed in a vicinity of an anodal longitudinal site of the nerve, at respective positions around the axis.

79. Apparatus according to claim 78, wherein the two or more cathodes comprise six or more cathodes.

80. Apparatus according to claim 78, wherein the two or more cathodes comprise twelve or more cathodes.

81. Apparatus according to claim 78, wherein the set of two or more cathodes are adapted to be placed at a distance from the axis of the nerve which is at least 1.5 times a radius of the nerve.

82. Apparatus according to any one of claims 78-81, comprising a control unit, adapted to drive current between respective ones of the cathodes and respective ones of the anodes.

83. Apparatus according to claim 82, wherein the control unit is adapted to cycle the current driving at a rate greater than 1000 Hz.

84. Apparatus according to claim 82, wherein the control unit is adapted to complete a sweep of driving the current through substantially all of the cathodes in less than 1000 microseconds.

85. Apparatus according to claim 82, wherein the control unit is adapted to complete a sweep of driving the current through substantially all of the cathodes in less than 100 microseconds.

86. A method for applying current to a nerve, comprising:

applying cathodic current in a vicinity of a cathodic longitudinal site of the nerve;

applying a primary anodal current to the nerve in a vicinity of a primary anodal longitudinal site of the nerve; and

applying a secondary anodal current to the nerve in a vicinity of a secondary anodal longitudinal site of the nerve that is closer to the primary anodal longitudinal site than to the cathodic longitudinal site.

87. A method for applying current to a nerve having a radius and a longitudinal central axis, comprising applying cathodic and anodal current to the nerve from respective cathodic and anodal current-application sites that are both located at distances from the axis of the nerve which are at least approximately 1.5 times greater than the radius of the nerve.

88. A method for applying current to a nerve, comprising:

applying cathodic current in a vicinity of a cathodic site of the nerve; and

applying anodal currents in a vicinity of respective anodal longitudinal sites of the nerve, the currents defining, in combination, an anodal activation function having: (a) a hyperpolarizing portion thereof having a maximum hyperpolarizing amplitude, and (b) a depolarizing portion thereof, having a maximum depolarizing amplitude corresponding to a depolarizing site on the nerve distal, with respect to the cathodic site, to a site corresponding to the hyperpolarizing portion, wherein the maximum hyperpolarizing amplitude is at least five times greater than the maximum depolarizing amplitude.

89. A method for applying current to a nerve having a longitudinal axis, comprising driving current between: (a) a set of two or more cathodic sites in a vicinity of a first longitudinal site of the nerve, which are located at respective positions around the axis, and (b) a set of two or more anodal sites in a vicinity of a second longitudinal site of the nerve, which are located at respective positions around the axis.

90. Apparatus comprising an implantable tubular cuff, the cuff:

shaped so as to define: (a) a longitudinal slit having a first edge and a second edge, and (b) at least one hole in a vicinity of the first edge; and

comprising at least one protrusion, which is coupled to the cuff in a vicinity of the second edge, and is adapted to hold the first and second edges together when the protrusion is passed through the hole and when the cuff is disposed within a body of a subject and surrounding longitudinal tissue of the subject.

91. Apparatus according to claim 90, wherein the cuff is shaped so as to define a plurality of holes in the vicinity of the first edge, and wherein the cuff comprises a plurality of protrusions, which are coupled to the cuff in the vicinity of the second edge, and are adapted to hold the first and second edges together when each of the protrusions is passed through a respective one of the holes.

92. Apparatus according to claim 90, wherein the cuff comprises at least one electrode.

93. Apparatus according to claim 90, wherein the cuff comprises two electrodes and an insulating element disposed therebetween.

94. Apparatus according to claim 93, wherein the cuff comprises a first flexible resilient material, and wherein the insulating element comprises a second flexible resilient material, the first material having a hardness different from a hardness of the second material.

95. Apparatus according to claim 90, wherein the cuff comprises a tab coupled to the first edge, the tab configured to aid in drawing the protrusion through the hole when the tab is moved toward the protrusion.

96. Apparatus according to claim 90, wherein the cuff comprises at least one flexible resilient material having a Shore D hardness between about 4 and about 80.

97. Apparatus according to claim 90, wherein the cuff comprises a first flexible resilient material in a vicinity of the hole, and a second flexible resilient material, the first material having a hardness different from a hardness of the second material.

98. Apparatus according to claim 90, wherein the cuff comprises a first flexible resilient material in a vicinity of the protrusion, and a second flexible resilient material, the first material having a hardness different from a hardness of the second material.

99. Apparatus according to any one of claims 90-98, wherein the cuff comprises a filament coupled to the protrusion.

100. Apparatus according to claim 99, wherein the filament is formed as an integral portion of the cuff.

101. Apparatus according to claim 99, wherein the cuff is configured so that when the filament is drawn through the hole, the protrusion is drawn through the hole thereafter.

102. Apparatus according to claim 90, wherein the tissue includes a nerve of the subject, and wherein the cuff is adapted to be placed around the nerve.

103. Apparatus according to claim 90, wherein the tissue includes a blood vessel of the subject, and wherein the cuff is adapted to be placed around the blood vessel.

104. Apparatus according to claim 90, wherein the tissue is selected from the list consisting of: a muscle of the subject, a tendon of the subject, a ligament of the subject, an esophagus of the subject, intestine of the subject, and a fallopian tube of the subject, and wherein the cuff is adapted to be placed around the selected tissue.

105. Apparatus according to claim 90, wherein the first edge comprises a flap, adapted to come in contact with a portion of the cuff in the vicinity of the second edge when the first and second edges are held together.

106. Apparatus according to claim 105, wherein, when no external force is applied to the cuff, the flap forms an angle of between about 90 and about 180 degrees with a surface of the cuff in the vicinity of the first edge.

107. Apparatus according to claim 106, wherein the flap comprises a tab, configured to help draw the protrusion through the hole when the tab is moved toward the protrusion.

108. Apparatus according to any one of claims 90-98, wherein each of the protrusions comprises a head portion and a neck portion, the head portion having a perimeter greater than a perimeter of the neck portion.

109. Apparatus according to claim 108, wherein a perimeter of the head portion is greater than a perimeter of the hole.

110. Apparatus according to claim 108, wherein the protrusion is adapted to be passed through the hole such that the head portion passes through the hole, and the neck portion remains substantially in the hole.

111. Apparatus according to claim 108, wherein the head portion has an initial shape prior to being passed through the hole, and is adapted to (a) assume a different shape while being passed through the hole, and (b) substantially return to the initial shape thereof after being passed through the hole.

112. Apparatus according to claim 108, wherein the head portion comprises a first flexible resilient material having a first hardness, and wherein a portion of the cuff excluding the head portion comprises a second flexible resilient material having a second hardness, the first hardness different from the second hardness.

113. Apparatus according to claim 108, wherein the cuff comprises a filament coupled to the neck portion.

114. Apparatus according to claim 113, wherein the cuff is configured so that when the filament is drawn through the hole, the head portion is drawn through the hole thereafter.

115. A method for enclosing a section of longitudinal tissue of a subject with a tubular cuff, the method comprising:

separating a first edge of a longitudinal slit defined by the cuff from a second edge of the slit;

placing the cuff within a body of the subject around the section of the tissue; and

passing at least one protrusion coupled to the cuff in a vicinity of the first edge, through at least one hole defined by the cuff in a vicinity of the second edge, so as to hold the first and second edges together.

116. A method according to claim 115, wherein passing the at least one protrusion through the at least one hole comprises passing a plurality of protrusions coupled to the cuff in the vicinity of the first edge, through a plurality of respective holes defined by the cuff in the vicinity of the second edge, so as to hold the first and second edges together.

117. A method according to claim 115, comprising applying current to the tissue in a vicinity of the cuff.

118. A method according to claim 115, comprising sensing an electrical potential of the tissue in a vicinity of the cuff.

119. A method according to claim 115, wherein placing the cuff comprises at least partially sealing the section of the tissue surrounded by the cuff from a portion of the tissue not surrounded by the cuff.

120. A method according to claim 115, wherein passing the protrusion through the hole comprises moving a tab coupled to the second edge toward the protrusion.

121. A method according to claim 115, wherein passing the protrusion through the hole comprises drawing a filament coupled to the protrusion through the hole.

122. A method according to claim 115, wherein the tissue includes a nerve of the subject, and wherein placing the cuff around the section of the tissue comprises placing the cuff around a section of the nerve.

123. A method according to claim 115, wherein the tissue includes a blood vessel of the subject, and wherein placing the cuff around the section of the tissue comprises placing the cuff around a section of the blood vessel.

124. A method according to claim 115, wherein the tissue is selected from the list consisting of: a muscle of the subject, a tendon of the subject, a ligament of the subject, an esophagus of the subject, intestines of the subject, and a fallopian tube of the subject, and wherein placing the cuff around the section of the tissue comprises placing the cuff around a section of the selected tissue.

125. A method according to claim 115, wherein passing the protrusion through the hole comprises bringing a flap of the second edge in contact with a portion of the cuff in the vicinity of the first edge.

126. A method according to any one of claims 115-125, wherein passing the protrusion through the hole comprises passing a head portion of the protrusion through the hole such that a neck portion of the protrusion remains substantially in the hole, the head portion having a perimeter greater than a perimeter of the neck portion.

127. A method according to claim 126, wherein passing the head portion through the hole comprises causing the head portion, while being passed, to assume a shape different from an initial shape of the head portion prior to its being

passed through the hole, such that the head portion substantially returns to the initial shape after being passed through the hole.

128. A method according to claim 115, wherein passing the protrusion through the hole comprises drawing a filament coupled to the neck portion through the hole.

129. A method for stimulating a vagus nerve of a subject, comprising:

applying to the vagus nerve a first electrode device, the first electrode device having a first characteristic diameter;

driving the electrodes of the first electrode device to apply a current to the vagus nerve;

measuring a reduction in heart rate of the subject responsive to driving the electrodes of the first electrode device to apply the current;

determining whether the reduction in heart rate is less than about 10%; and

responsive to determining that the reduction in heart rate is less than about 10%, removing the first electrode device from the nerve and applying to the vagus nerve a second electrode device, the second electrode device having a second characteristic diameter smaller than the first characteristic diameter.

130. A method according to claim 129, wherein applying the first electrode device comprises:

applying the first electrode device, wherein the first characteristic diameter corresponds to a characteristic distance of electrodes of the first electrode device from an axis of the nerve when the first electrode device is applied to the nerve, and wherein the second characteristic diameter corresponds to a characteristic distance of electrodes of the second electrode device from an axis of the nerve when the second electrode device is applied to the nerve, the second characteristic distance being smaller than the first characteristic distance.

131. A method according to claim 129, wherein applying the first electrode device comprises:

applying the first electrode device, wherein the first characteristic diameter corresponds to a characteristic distance of an insulating element of the first

electrode device from an axis of the nerve when the first electrode device is applied to the nerve, and wherein the second characteristic diameter corresponds to a characteristic distance of an insulating element of the second electrode device from an axis of the nerve when the second electrode device is applied to the nerve, the second characteristic distance being smaller than the first characteristic distance.